



Performance Comparison

CLS Token:

- Learnable aggregation
- Task-specific
- ✓ Pre-trained
- ✓ BERT's approach
- ✓ Effective
- ✗ Single vector

Mean Pooling:

- Simple averaging
- No learning
- Dilutes information
- ✓ Simple
- ✓ No params
- ✗ Poor performance

Max Pooling:

- Sparse selection
- Loses context
- Task-dependent
- ✓ Sparse
- ✓ No params
- ✗ Loses nuance

Attention Pool:

- Flexible weighting
- More parameters
- ✓ Adaptive
- ✓ Often competitive
- ✓ Flexible
- ✗ More complex